AMENDMENTS TO THE SPECIFICATION:

Please make the following changes at the indicated locations in the specification:

Page 1, line 1, please delete this line in its entirety, i.e. delete "Uses of glass ceramics".

Page 1, between line 1 and the first paragraph, please insert the following:

GLASS CERAMICS WITH UV BLOCKING PROPERTIES AND LAMPS CONTAINING SAME

CROSS-REFERENCE

This is the U.S. National Stage of PCT/EP 2005/000018, filed on January 4, 2005, in Europe. The invention described and claimed herein below is also described in German patent application 10 2004 001 176.1, which was filed on January 5, 2004, in Germany, and in German patent application 10 2004 024 022.1, which was filed on May 13, 2004, in Germany. The aforesaid German patent applications provide the basis for a claim of priority of invention for the invention described and claimed herein below under 35 U.S.C. 119 (a) to (d).

BACKGROUND OF THE INVENTION

1. The Field of the Invention

Page 1, between the first and the second paragraph, please insert the following heading:

2. The Related Art

Page 2, fourth paragraph, please make the following change in this fourth paragraph:

At the moment, resistance glass (usually alkali-free aluminum silicate glass) and silica glass (SiO_2) are used for lighting units in the area of halogen lamps, e.g. for automobiles[[,]] ~~as material there are used resistance glass (usually alkali-free aluminium silicate glasses) and silica glass (SiO_2)~~.

Page 5, between lines 8 and 9 (i.e. between the first and second full paragraphs, please insert the following heading:

SUMMARY OF THE INVENTION

Page 6, lines 1 to 3, (first paragraph), please make the following changes in the paragraph between these lines:

~~Demands regarding the glass ceramics for the uses according to the present invention are properties~~ Properties such as ~~for example~~ good temperature stability with superior transparency are required for the glass ceramics according to the present invention.

Page 6, lines 4 to 7, (second paragraph), please make the following changes in the paragraph between these lines:

As to temperature stability, it should be higher than that [[those]] of resistance glass. Conventional glasses which may be used here and which are e.g. ~~from the type aluminium~~ aluminum silicate glass, have transformation temperatures (Tg) in the range of 700 to 800°C. At such temperatures the glass is still in the solid state [[yet]].

Page 6, lines 8 to 14, (third paragraph) please make the following changes in the paragraph between these lines:

Since no so-called "Tg" can be determined for glass ceramics, it is useful to determine the temperature stability of a glass ceramic from the temperature dependence of its viscosity ~~a yet stable condition which is dependent of the temperature, on the basis of the viscosity of the glass ceramic in dependence of the temperature~~. Such viscosity measurements are shown and explained in example 3 below. A suitable glass ceramic should not have the ability to flow in a viscous manner even at higher temperatures and it should withstand lamp operation temperatures of higher than 800°C, preferably of higher than 900°C and further preferably higher than 1000°C.

Page 7, lines 5 to 11, (first full paragraph), please make the following changes in the paragraph between these lines:

For some uses according to the present invention, it should be possible to fuse the glass ceramic and/or ~~respectively~~ the green glass with the electrical passages, which according to the [[uses]] application consist of molybdenum, tungsten or alloys, such as Vacon 11® ("Kovar"). Thus, a long-term hermetic ~~hermetically proof~~ seal between the electrically and thermally conductive metal passage and the bulb material can be provided and problems which are created by different ~~properties regarding the~~ thermal expansion properties of the ~~materials~~ glass and metal materials can be solved.

Page 7, lines 21 to 24, (third full paragraph), please make the following changes in the paragraph between these lines:

In this case, the glass ceramic can be designed so that its thermal expansion approximates the thermal expansion of the electrode material consisting of metal ~~will approximate~~, which has the advantage that also at operation temperature during the operation of the lamp no leaks are generated.

Page 9, lines 1 to 10 (first **and** second paragraphs), please make the following changes in the two paragraphs between these lines:

Further, by the ceramication program, the surface chemistry and/or ~~respectively~~ a depth profile for certain elements may be adjusted, thus in the course of the ceramication in regions near the surface a desired content of alkalis may be adjusted, also as a fine adjustment of "alkali-poor" to "alkali-free".

During the ceramication also a concentration gradient of certain elements can be created which may be effected by their incorporation into the crystalline phase and/or ~~respectively~~ their remaining/enrichment in the residual glass phase, in particular by the creation of a glass-like surface layer, the thickness and composition of which can be determined by the composition of the starting glass and the ceramication atmosphere.

Page 10, lines 10 to 19, (second **full** paragraph), please make the following change in the paragraph between these lines:

Also ceramication regimes for the hermetic sealing of ~~generation of a hermetically proof crossing from~~ the glass to an electrical passage are possible. In this case, the assumption can be made that through shrinkage of the material during the ceramication ~~favourable~~ favorable stress conditions (axial/radial) are generated and thus a hermetically sealed ~~proof~~ connection is provided. By the use of glass ceramic materials which are adjusted in their thermal expansion (preferably in glass-like as well as ceramicated condition), also more massive metal passages (instead of very thin Mo plates, used e.g. in halogen lamps on the basis of silica glass, silica glass as outside bulb for HID lamps) can be used which should also favor better heat ~~be in favour of a better thermal~~ dissipation from the lamp.

Page 11, lines 24 to 26, (third **full** paragraph), please make the following changes in the paragraph between these lines:

Main crystalline phases of ~~aluminium~~ aluminum niobate, [[and/or]] ~~aluminium~~ aluminum tantalate and/or ~~aluminium~~ aluminum niobates-tantalates are also undesired. Preferably less than 5 % by weight of niobium and/or tantalum oxide are used in the starting melt.

Page 12, between lines 16 and 17, (between the line beginning "as outside bulbs..." and the line beginning "The following examples...", please insert the following heading:

BRIEF DESCRIPTION OF THE DRAWING

Page 12, lines 17 to 20, please make the following changes in the paragraph between these lines:

The following examples should describe the present invention without limiting the scope thereof. As will be apparent from the above description for a person skilled in the art, the present invention comprises a series of further aspects which basically could also be claimed separately and independently. The properties of the following examples of the invention and comparative examples are illustrated on the accompanying figures, in which:

Figure 1 is a graphical illustration of the dependencies of viscosity on temperature for an alkali-containing glass ceramic and an alkali-free glass ceramic according to the present invention;

Figure 2 is a graphical illustration of the dependencies of transmission on wave length for an example of an alkali-containing green body and two examples of alkali-containing glass ceramics made from the green body by different temperature regimes;

Figure 3 is a graphical illustration of the dependencies of percent transmittance on wave length for an example of a LAS glass ceramic and a comparison glass;

Figure 4 is a graphical illustration of the dependencies of percent transmittancies on wave length for the LAS glass ceramic of fig. 3, for an LAS glass ceramic that differs in its composition from that of fig. 3 and for their respective green bodies;

Figure 5a is a graphical illustration of the dependencies of transmission on wave length for two examples of the LAS glass ceramics having different average crystallite sizes but the same composition as the LAS glass ceramic shown in fig. 3, which shows that the UV cutoff can be adjusted by varying the crystallite sizes;

Figure 5b is a graphical illustration of the dependencies of percent transmittance on wave length for the LAS glass ceramic of fig. 3, for a ZEODUR® glass ceramic and for a commercially obtained UV blocking glass of the prior art;

Figure 6a is a graphical illustration of the dependencies of transmission on wave length for the two glass ceramics illustrated in fig. 4 and for a silica comparison glass;

Figure 6b is a graphical illustration of the dependencies of transmission on wave length for another glass ceramic with a different TiO_2 concentration than that of the glass ceramic of fig. 6a and for a silica comparison glass; and

Figure 7 is a graphical illustration of the dependencies of transmission on wave length for irradiated and non-irradiated samples of a alkali-free glass ceramic according to the present invention and for irradiated and non-irradiated samples of an aluminum silicate comparison glass.

Page 12, between line 20 and 21 (line 20 starts "could also..." and line 21 is "Example 1:"), please insert the heading:

EXAMPLES

Page 12, line 22 to page 13, last line, please make the following changes in the section between these lines:

Example 1 describes compositions of alkali-containing glass ceramics which have proved to be favorable ~~favourable~~ in tube take-up tests and which are suitable for uses according to the present invention in the form of a tube: LAS (Li_2O-Al_2O_3-SiO_2) glass ceramic with an alkali-containing composition, in weight percent, of: ~~in the form of a tube (alkali-containing)~~

~~Main ingredient: Proportion [MA %]~~

67.2	SiO_2
21.4	Al_2O_3
3.8	Li_2O
1.1	MgO
1.7	ZnO
2.2	TiO_2
1.7	ZrO_2
0.2	As_2O_3

0.1	K_2O
0.4	Na_2O
0.016	Fe_2O_3.
Sum	99.8

Example 2:

Example 2 describes the composition of an alkali-free glass ceramic which is suitable for uses according to the present invention in the form of a tube:

Alkali-free glass ceramic of the system MAS (MgO-Al_2O_3-SiO_2) with an alkali-free composition, in weight percent, of: ~~in the form of a glass ceramic tube~~

~~Main ingredients:~~	~~Proportion [MA %]~~
58.5	SiO_2
20.3	Al_2O_3
4.2	MgO
8.4	ZnO
3.0	TiO_2
5.0	ZrO_2
0.5	As_2O_3
Sum	99.9

The glass ceramic material of example 2 was used for the viscosity measurements (referred to as AF-GC in figure ~~graphic~~ 1 in example 3 below).

Page 14, lines 3 to 11, (first and second paragraphs), please make the following changes in these two paragraphs:

The thermal stability can be modified by synthesis and different ceramication programs. For the evaluation of the thermal stability, the temperature dependence of the viscosity of the material ~~in dependence of the temperature~~ is used.

In figure ~~graphic~~ 1, the viscosity ([[in]] dependence **[[**of]] on the temperature) of the alkali-containing and alkali-free glass ceramics AH-GC and AF-GC ~~useable~~ according to the present invention is compared with the viscosity of an aluminum ~~aluminium~~ silicate glass ~~and silica glass~~. It is shown that the glass ceramics are superior in relation to the aluminum ~~aluminium~~ silicate glass. When tests were performed ~~With performing the tests~~, the long term stability of each of the glass ceramics was ~~could be~~ confirmed ~~each~~.

Page 14, line 12, (first line after the first two paragraphs), please delete this line in its entirety, i.e. delete "Graphic 1:".

Page 14, after line 12, please delete the figure together with the labels on the X- and Y- axes from the text on page 12.

Page 15, lines 3 to 5, (the first paragraph), please make the following changes in this paragraph:

Figure 2 ~~Graphic 2 below~~ shows that glass ceramics ~~to be used~~ according to the present invention have a better blockage of UV radiation compared to a starting or green glass for glass ceramics.

Page 15, line 6 and the figure following line 6, please delete line 6 (delete "Graphic 2") and the figure following it in its entirety together with the labels on the X- and Y- axes.

Page 16, lines 5 to 8, (second paragraph), please make the following changes in this paragraph:

Figure ~~Graphic~~ 3 shows the transmission curves (transmittance [%] vs. wave length [nm]) of a further embodiment example (glass ceramic A1) and of a comparison example V1 for the range of wave lengths of 300 nm to 550 nm. The measurements were conducted [[at]] with samples with a thickness of 0.3 mm each.

Page 16, line 9 and the figure immediately following line 9, please delete line 9 (delete "Graphic 3:") in its entirety and the figure following it in its entirety together with the labels on the X- and Y- axes.

Page 17, last paragraph, please make the following changes in this paragraph:

Figure ~~Graphic~~ 3 shows a UV blockage of the glass ceramic A1 which is in addition clearly improved in comparison to the already [[well]] good UV blocking

glass V1 despite the low content of TiO_2 in the glass ceramic A1, with a very small transmission loss in the visible range which can be ignored.

Page 18, third paragraph (following the heading "Example 6:"), please make the following changes in this paragraph:

Figure ~~Graphic~~ 4 shows the transmission curves (250 to 550 nm) of the embodiment example A1 and a further embodiment example A2 which is different from A1 only due to its reduced content of TiO_2 (2.0 % by weight, instead of 2.6) as well as its increased content of Al_2O_3, ZnO and ZrO_2 (0.1 % by weight each), as well as of two comparison examples V2 and V3, which correspond to the green glasses of A1 and A2, that is the non-ceramicated starting ~~basis~~ glasses, wherein V2 has the same composition as A1 and V3 has the same composition as A2.

Page 19, line 1 and the figure immediately below line 1, please delete line 1 (delete "Graphic 4:") in its entirety and the figure immediately following it in its entirety together with the labels on the X- and Y- axes.

Page 19, first paragraph below the figure, please make the following changes in this paragraph:

Figure ~~Graphic~~ 4 illustrates not only the improvement of the UV blockage due to the increase of the content of TiO_2 (V2 vs. V3), but in particular the strong

improvement of the UV blockage due to the ceramication (A1 vs. V2 respectively A2 vs. V3).

Page 19, second paragraph below the figure (the paragraph beginning "Graphic 5"), please make the following changes in this paragraph:

Figure ~~Graphic~~ 5 shows the transmission curves of embodiment examples according to the present invention, which are referred to as A1a and A1b. A1a and A1b have the same composition as A1 (see above). However, due to variations in the ceramication program, they comprise crystallites with an average crystallite size of ca. 30 nm (A1a) and ~~respectively~~ ca. 50 nm (A1b) respectively, which were measured by X-ray diffractometry.

Page 20, line 1, and the figure immediately below line 1, please delete line 1 (delete "Graphic 5:") in its entirety and the figure immediately following it in its entirety together with the labels on the X- and Y- axes.

Page 20, first paragraph below the figure, please make the following changes in the paragraph between these lines:

Figure 5a ~~Graphic 5~~ shows that by variation of the particle size a fine tuning of the UV edge is possible. In this case, the particle size was adjusted by a variation of the ceramication conditions, especially the maximum temperatures/residence times of the step of crystal growth. Figure 5b ~~Graphic 5a~~ also shows a transmission curve of A1, however in comparison to the transmission curve of the

commercially available glass V4, and ~~as well as further~~ the transmission curve (A4) of a glass ceramic of the type ZERODUR®, a further example of LAS glass ceramics having mixed high quartz crystals as crystalline phase with no expansion. This glass ceramic is featured by average crystallite sizes of higher than 68 nm and a proportion of the crystalline phase of higher than 70 % by volume.

Page 21, line 3, and the figure immediately below line 3, please delete line 3 (delete "Graphic 5a:") in its entirety and the figure immediately following it in its entirety together with the labels on the X- and Y- axes.

Page 22, first paragraph, please make the following changes in this paragraph:
In figure ~~graphic~~ 6a ~~below~~, transmission curves of the glass ceramics A1 and A2 according to the present invention are compared with ~~the data of~~ a comparison glass V5. Now, the corresponding samples have a thickness of 1 mm.

Page 22, last paragraph, please make the following changes in this paragraph:
As shown in figure ~~graphic~~ 6b, the transmission can even reach values of 88 % or more by a suitable selection of the composition and the raw materials (see example A3, content of [[Ti_2O]] TiO_2 of 2.3 % by weight). The comparison example V5 is the same as shown in figure ~~graphic~~ 6a.

Page 23, please delete the figures on page 23 in their entirety and also line 1 and the line between the figures in their entirety, i.e. please delete the labels "Graphic 6a:" and "Graphic 6b:", i.e. delete the entire page 23.

Page 24, first paragraph (starting "Graphic 7.. on line 4), please make the following changes in this paragraph:

Figure ~~Graphic~~ 7 ~~below~~ shows that, on [[at]] irradiation with UV light, aluminum ~~aluminium~~ silicate glass suffers from degeneration, namely that it has lower transmission values after UV irradiation. Thus, the transparency of conventional glass deteriorates after the exposure of UV radiation. Such an effect does not occur with the glass ceramics ~~to be used~~ according to the present invention, as can be seen from figure [[5]] 7 (the courses of the curves of the irradiated and non-irradiated materials correspond to the non-irradiated material respectively to the material which was irradiated with UV light for 15 hours).

Page 25, line 1, and the figure immediately below line 1, please delete line 1 (delete "Graphic 7:") in its entirety and delete the figure immediately following it in its entirety together with the labels on the X- and Y- axes.